March. A few days later on the 19th I noticed that the moth had just died, having laid ova within the container, and only days before the first flowering male sallow catkins appeared in the wild. Despite careful search in the spring over a number of years I have failed to find *C. ligula* at light, sugar or sallow blossom.

Finally, on New Year's Day (1/1/1973), I found a slightly worn female *Brachionycha sphinx* Hufn. at rest on an oak tree near Ledbury. The moth had disappeared when I re-examined the tree two days later. The females of this species are elusive in the wild and are less frequently seen at light than the males. Records of both sexes appear at light in the last week of October and the first fortnight of November in this area. It is possible that the females normally survive longer than the males in the wild and the mild weather prevalent at the time may have a further influence on survival.

The present winter of 1973/74 has also been mild but I have not observed any unusually early or late appearances of our common winter or early spring species to date. Although mild, the weather has been more violent with strong winds and rain. This combined with the need to conserve lighting has greatly reduced the number of records.

Studies on the Occurrence and Distribution of the Genera *Cionus* and *Cleopus* (Col.. : Curculionidae) in South Hampshire, 1973

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Introduction

Weevils of the genera *Cionus* and *Cleopus* have interested the writer for some 3-4 years, but it is only during 1973 that detailed observations have been made and recorded. These beetles unlike most other weevils, live both as larva and imago ectophagously on their food-plant (though inside the young flower bud in the case of the young larvae of *Cionus hortulanus*). Various species of the two genera are sometimes found to co-exist on the selfsame plant specimen, the common figwort *Scrophularia nodosa*; and at least one species of *Cionus* is found on both *Scrophularia nodosa* and *S. aquatica*. Attempts to ascertain how various species, in spite of apparent competition, can co-exist are a subject of present investigations.

The species which are the subject of this report are — *Cionus hortulanus* Geof., *C. alauda* Hbst., *C. tuberculosus* Scop.,

Cleopus pulchellus Hbst. No other species of these genera were observed.

Geographical Areas Covered

These observations have been in areas up to some 15 miles north and north-east of Portsmouth, together with one (fruitful) visit to the extreme west of Hampshire County. Twenty-nine (29) sites where *Scrophularia* spp. have been found have been examined; and also about the same number of sites of *Verbascum* spp. The mixed suburban/semi-rural/open rural nature of the areas, together with their considerable size, has precluded anything approaching full or systematic examination.

Materials and Methods

In most cases small numbers of specimens were collected from infested sites. The perfect insects have a good defence mechanism: on one's approach they frequently 'play possum', and releasing their hold, fall to the ground where they are all but impossible to find. This reaction appears to be most highly developed in *C. hortulanus* and least in *C. alauda*. On rare occasions, the weevils may take to the wing. This seems associated with high temperatures—above about 25 deg. C. Specimens observed on the food plants may conveniently be caught with the aid of a specimen tube about 2·5 cm in diameter — though practice involving both stealth and speed is required.

Where larvae only, or larvae in addition to perfect insects were found, the former were collected, fed and allowed to reach the imago stage before identification was made. Placed in a plastic Petri dish perforated with twenty or so small holes made with a heated pin, the larvae thrived and reached maturity when fed every 2-3 days on lightly moistened leaves of the food-plant.

In one case it was possible to make a strong prognosis that more than one species was represented by comparing and finding considerable differences in the weights of co-existing pupae and imagos. The suspicions were subsequently confirmed after the pupae hatched.

Observations

The reports on sites of *Scrophularia* spp. are presented in tabular form (sections A and B). Both infected and uninfected sites are included so that some indication of frequency is apparent. Map references are not included: work is intended at the sites in future seasons. There can be little doubt however that both food plants and weevils are common and widely distributed. Section C of these observations reports with reference to *Verbascum* spp.

A. Sites of *Scrophularia nodosa* (x=present. —=absent)

Site letter	No. of plants	Brief description of site and appropriate notes	Incident light (estimate) Open exposed site=1·0	*Cionus hortulanus*	*Cionus alauda*	*Cionus tuberculosus*	*Cleopus pulchellus*
A	c.50	S.W. facing grassy slope (since 'cultivated' by Local Authority).	0·7	x	x	—	x
B	c.20	Roadside bank rural but fairly busy lane.	0·3	—	—	—	—
C	1	Bridle-path running E-W between high hedges.	0·2	—	—	—	—
D	c.6	Roadside bank, rural-residential area.	0·5	—	—	—	—
E	c.20	Rural District Council roadside dump for road sweepings. Beneath beech.	0·15	—	—	—	—
F	3	Roadside verge, rural, light traffic.	0·2	—	—	—	—
G	c.20	Waste ground adjacent to private garage complex (1972). Not infested 1973.	0·6	x	—	—	—
H	c.15	W.—facing chalky bank A3 Portsmouth-London Road.	0·8	x	x	—	—
J	c.20	Roadside verge. Heavy infestation 1969-1970. (None 1972 and 1973).	0·5	x	—	—	—
K	3	Rural footpath, sparse hedge both sides (1972).	0·4	—	—	—	—
L	c.200	Clearing in wood (oak, beech, ash, hazel) site c.40×100 m.	0·5 — 0·15	x	x	—	x
M & M_1	2	Fairly open woodland (two nearby sites combined).	0·07	—	—	—	—
N	4	Rural footpath, sparse hedge both sides. Small oaks in hedge.	0·4	—	—	—	—
P	c.12	Footpath in mixed wood. (plants flowering very sparsely)	0·02	—	—	—	—
Q	4	Dell in mixed wood, species' identification not certain. (few larvae only: none taken).	0·05	x?	—	—	—
Q_1	2	Woodland adjacent to Q.	0·02	—	—	—	—
R	c.10	Fairly open woodland, mixed; behind suburban development.	0·08	—	—	x	—
S	2	Chalky bank, S.W.—facing rural road.	0·4	—	—	—	—
T	2	Side of grassy lane adjacent to area of bracken and mixed wood.	0·6	—	—	—	—

U	c.20	Track on N. slope of sparsely wooded hill, chalk downs.	0·3	—	—	—	—
V	1	Sparsely colonized verge of new by-pass, coniferous wood nearby.	0·3	—	—	—	—
W	2	Roadside bank, rural road.	0·15	—	—	—	—
BB	2	Suburban/rural garden.	0·3	—	—	—	—
CC	1	Beside unmade road running N.—S. Meadow to E., trees to W.	0·3	—	—	—	—
B. Sites of *Scrophularia aquatica* (x=present, —=absent)							
X	c.15	Roadside ditch—rural road.	0·25	—	—	x	—
Y	est. 1000	Roadside ditch and its gently sloping banks—rural road.	0·7	—	—	x	—
Z	c.20	River bank of small river c.6 metres wide.	0·7	—	—	—	—
AA	c.20	Bank of deep stream c.6 metres wide (11 November 1973).	0·7	—	—	x	—

C. Sites of *Verbascum* spp.

In spite of examining an estimated 500 specimens of dark mullein *Verbascum nigrum* at some 20 sites, and also examining an estimated 80 specimens of hairy mullein *Verbascum thapsus* at some 10 sites; no weevils of any species whatsoever were found there by the writer.

Discussion

Of the four species of weevils, only *Cionus tuberculosus* is reported here as being found on both *Scrophularia aquatica* and *S. nodosa*. *Cionus hortulanus* has been found on *S. nodosa* and on no other species of plant (except on grasses and brambles adjacent to *S. nodosa* during "flying weather"). The assertion of LINSSEN (1959) that dark mullein is the food plant of *C. hortulanus* is therefore suspect. SHERF (1964) reports four plant species as substrates for *C. hortulanus;* viz. *Verbascum nigrum, V. phlomodes, Scrophularia aquatica,* and *S. nodosa.* Up until this time, observations here reported admit to only the last-mentioned species as a food plant for this weevil.

Further, the writer found no specimens of *Cionus scrophulariae* L. whatsoever. Its description (LINSSEN 1959) as a "widespread species though local in distribution . . . . which occurs on *Scrophularia aquatica* . . . .*S. nodosa* and *Verbascum thapsus*" is consistent with FOWLER (1891) as to food plants. As to distribution, FOWLER remarks "rather local, but common where it occurs".His report includes reference to Winchester, Southampton, New Forest; but the Portsmouth district and Portsdown are not listed—conspicuously absent, one may remark, as Portsmouth and Portsdown feature frequently in reports on other beetles. The apparent absence of *C. scrophu-*

lariae thereabouts is within the writer's experience. SHERF (1964) reports SCOTT (1937) as having found larvae of *C. scrophulariae* on *Celsia areturus*, *Buddleia globosa* and *Phygelius capensis;* flora that had been imported into Europe. Thus this weevil may be both rarer and less specialized in its food plants than is generally assumed.

The range of situations in which *Scrophularia* spp. infested with *Cionus* spp. and *Cleopus pulchellus* have been found is wide: incident light, substrate, degree of exposure of site (and probably ambient air humidity and temperature) varied greatly (see sites H.L., and R.; under Observations). No conclusions can be drawn here, though there is some indication that infestation is not restricted within a narrow range of habitats for those plants that these weevils utilize.

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Observations on British Butterflies in 1973

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The hibernating butterflies started moving out of their Winter quarters fairly early in 1973, and our first *Aglais urticae* L. was noted in Southampton on March 7th, with *Gonepteryx rhamni* L. following two days later. These two species were seen in and around Southampton throughout the first half of March, and *Nymphalis io* L. joined their ranks just after this when the weather was warm and sunny for several days. Toward the end of the month I spent a good deal of my spare time exploring a wood near Romsey where numbers of fresh *Brephos parthenias* flew in the sunshine, and where *Polygonia c-album* L. was recorded on March 21st. The month